ATTENTION:
GENERAL MANAGER ❑
PARTS MANAGER ❑
CLAIMS PERSONNEL ❑
SERVICE MANAGER ❑

IMPORTANT - All Service Personnel Should Read and Initial in the boxes provided, right.

SUBARU

QUALITY DRIVEN® SERVICE

SERVICE BULLETIN

APPLICABILITY: 2020-24MY Outback & Legacy
19-24MY Forester

NUMBER: 09-125-24

DATE: 07/08/24

SUBJECT: P0890 TCM Power Relay Sense Circuit Low P26A* Engine Coolant Bypass Valve "A" Range/Performance

INTRODUCTION:

This bulletin announces the availability of new reprogramming files for the Engine Control Module (ECM). These files have been developed to address concerns of the starter motor not operating. While attempting a restart after a short drive cycle in low ambient temperatures (less than 0 Degrees Celsius/32 Degrees Fahrenheit), the starter motor may not operate. DTC P0890 (TCM Power Relay Sense Circuit Low) will likely be stored in the ECM under this condition. Condensed moisture in the ignition relay can cause the contact points to freeze under these conditions. The new logic enhances the relay self-shutdown program, eliminating the possibility of frozen relay contacts. In addition, this logic also contains optimized software for the Thermo Control Valve (MCV) to prevent any midsection of DTC P26A*.

PRODUCTION CHANGE INFORMATION:

This new software has been incorporated into vehicle production as per the VIN table below.

Applicable Vehicle	Starting VIN
LEGACY	R3018958
OUTBACK	R3209422
FORESTER	RH419257

SERVICE PROCEDURE / INFORMATION:

REMINDER: Customer satisfaction and retention starts with performing quality repairs.

- **2020-22MY Outback & Legacy**
  2019-24MY Forester: Reprogram the ECM following the normal FlashWrite procedure.

- **2023-24MY Outback & Legacy:** Reprogram the ECM Control Module following the normal SSM5-R procedure. Detailed information regarding the SSM5-R reprograming procedures can be found in TSB **14-28-21R**.

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LEGACY & OUTBACK PAK FILE INFORMATION:

MY	Applicable Vehicle	Specification	File Description	Old Part Number	Decryption Keyword	New CID
2020	LEGACY	2.5L NA CVT	22765AN20H.pk2	22765AN20A 22765AN20B 22765AN20C 22765AN20D 22765AN20E 22765AN20F 22765AN20G	80F3F042	XE1J600m00G
	OUTBACK	2.5L NA CVT	22765AP54H.pk2	22765AP54A 22765AP54B 22765AP54C 22765AP54D 22765AP54E 22765AP54F 22765AP54G	D7DCFE8A	XE1J600n00G
2021	LEGACY	2.5L NA CVT	22765AR18F.pk2	22765AR18A 22765AR18B 22765AR18C 22765AR18D 22765AR18E	2183E3F3	XE1P800m00G
	OUTBACK	2.5L NA CVT	22765AR19F.pk2	22765AR19A 22765AR19B 22765AR19C 22765AR19D 22765AR19E	A55FC233	XE1P800n00G
2022	LEGACY	2.5L NA CVT	22765AS22F.pk2	22765AS22A 22765AS22B 22765AS22C 22765AS22D 22765AS22E	BE49F201	XE1Q400m00G
	OUTBACK	2.5L NA CVT	22765AS23F.pk2	22765AS23A 22765AS23B 22765AS23C 22765AS23D 22765AS23E	4DB14C7F	XE1Q400n00G

LEGACY & OUTBACK PFC FILE INFORMATION:

MY	Model	Specification	File Description	Old CID Number	New CID
2023	LEGACY	2.5L NA CVT	22765AS49D.pfc	22765AS49A 22765AS49B 22765AS49C	XE1X020m00G
2023	OUTBACK	2.5L NA CVT	22765AS50D.pfc	22765AS50A 22765AS50B 22765AS50C	XE1X020n00G
2024	LEGACY	2.5L NA CVT	22765AT70C.pfc	22765AT70A 22765AT70B	XE1X020L00G
2024	OUTBACK	2.5L NA CVT	22765AT71C.pfc	22765AT71A 22765AT71B	XE1X020J00G

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FORESTER PAK FILE INFORMATION:

MY	Model	Specification	File Description	Old Part Number	Decryption Keyword	New CID
2019	FORESTER	2.5L NA CVT	22765AL827.pak	22765AL820 22765AL821 22765AL822 22765AL823 22765AL824 22765AL825 22765AL826	A44B186E	XE1FB00A
2020	FORESTER	2.5L NA CVT	22765AN466.pak	22765AN460 22765AN461 22765AN462 22765AN463 22765AN464 22765AN465	585CB1E4	XE1M700a00G
2021	FORESTER	2.5L NA CVT	22765AR675.pak	22765AR670 22765AR671 22765AR672 22765AR673 22765AR674	67CEEA2A	XE1P800a00G
2022	FORESTER	2.5L NA CVT	22765AR604.pak	22765AR600 22765AR601 22765AR602 22765AR603	E1A8EC6C	XE1R600k00G
2022	FORESTER	2.5L NA CVT	22765AR554.pak	22765AR550 22765AR551 22765AR552 22765AR553	B4E98F7C	XE1R600a00G
2022	FORESTER	2.5L NA CVT	22765AR614.pak	22765AR610 22765AR611 22765AR612 22765AR613	73EC24BE	XE1R600z00G
2023	FORESTER	2.5L NA CVT	22765AS923.pak	22765AS920 22765AS921 22765AS922	8BAB05EA	XE1X020k00G
2023	FORESTER	2.5L NA CVT	22765AS933.pak	22765AS930 22765AS931 22765AS932	AD4C67EE	XE1X020z00G
2023	FORESTER	2.5L NA CVT	22765AV272.pak	22765AV270 22765AV271	3B0220F6	XE1X020p00G
2023	FORESTER	2.5L NA CVT	22765AV282.pak	22765AV280 22765AV281	69EF98B7	XE1X020s00G
2024	FORESTER	2.5L NA CVT	22765AU211.pak	22765AU210	2EB5F50E	XE1X020q00G
2024	FORESTER	2.5L NA CVT	22765AU221.pak	22765AU220	C3277E3B	XE1X020r00G

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Subaru of America, Inc. (SOA) highly recommends utilizing either the Subaru Midtronics DCA8000 Dynamic Diagnostic Charging System or the Subaru Midtronics GR8-1100 Diagnostic Battery Charger to the vehicle and utilizing the Power Supply Mode feature anytime a vehicle control module is being reprogrammed. Once the Midtronics charger is connected to the vehicle, if the battery is fully charged, it takes less than three (3) minutes to boot-up the charger, select the Power Supply Mode, and have the battery voltage stabilized and ready for reprogramming.

NOTES:

- For instructions on using the Power Supply Mode, reference the applicable User Manual for the Midtronics DCA-8000 Dynamic Diagnostic Charging System and the Midtronics GR8-1100 Diagnostic Battery Charger on STIS.
- Confirm all electrical loads such as lights, audio, HVAC, seat heaters, and rear defroster are all switched OFF before setting up the charger for Power Supply Mode.
- Select the correct battery type (Enhanced Flooded, Flooded, Gel, AGM or AGM Spiral).
- Input the CCA which matches the vehicle's battery. **NOTE:** OE and replacement batteries have different CCA ratings. Always confirm the battery's CCA rating before proceeding.
- If using a DCA-8000 Dynamic Diagnostic Charging System, set the power supply voltage to 13.5 Volts.
- DO NOT connect the DST-i or DST-010 until the Power Supply mode function has completed its battery test mode and the Charging Voltage has dropped to and shows a steady 13.5 Volts on the display.
- Once Power Supply Mode reaches a steady 13.5 Volts, connect the DST-i or DST-010 to the OBD connector and proceed with initiating the normal SSM5-R reprogramming process.
- Amperage will fluctuate based upon the vehicle's demand for power. **NOTE:** If the voltage rises beyond 14 Volts while programming is in process, the procedure will abort. This can indicate a need to test or charge the vehicle battery before any further attempt at programming is made.
- ALWAYS set the power supply voltage to 13.5 Volts when using Power Supply Mode. NEVER turn the ignition switch on when charging at voltages 15 Volts or higher.

REMINDER: If the DCA-8000 or GR8-1100 indicates the vehicle's battery must be charged, charge the battery fully before proceeding to reprogram the vehicle while using the Power Supply Mode.

NOTE: Control module failures resulting from battery discharge during reprogramming are not a matter for warranty. Should any DTCs reset after the reprogramming update is performed, diagnose per the procedure outlined in the applicable Service Manual.

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WARRANTY / CLAIM INFORMATION:

For vehicles within the Federal Emissions Extended Defect Warranty period, this repair may be submitted using the following claim information:

Labor Description	Labor Operation #	Fail Code	Labor Time
MFI OBDII ECM Reprogramming	A453-086	UPG-48	0.4

IMPORTANT: Always note the original Calibration Identification number (CID) / ROMID the vehicle came in with on the repair order **before** reprogramming and, make sure to list the **NEW** CID / ROMID for any newly installed programming (as confirmed from the actual control module **AFTER** installation). The **NEW** CID / ROMID MUST also be noted on the repair order as this information is required for entry in the Miscellaneous Detail field during claim submission. These numbers can be read using SSM5-R.

NOTE: The pfc file listings provided in this bulletin are the latest available at the time of publishing. Updates are often released thereafter without revision to the original bulletin. For this reason, it is critical to always have the latest version of Select Monitor software installed on your system. You can confirm if a later version is available by entering the CID listed in this bulletin into SSM5-R. If a newer CID is shown as available in SSM5-R, reprogram using that file.

IMPORTANT REMINDERS:

- SOA strongly discourages the printing and/or local storage of service information as previously released information and electronic publications may be updated at any time.
- Always check for any open recalls or campaigns anytime a vehicle is in for servicing.
- Always refer to STIS for the latest service information before performing any repairs.